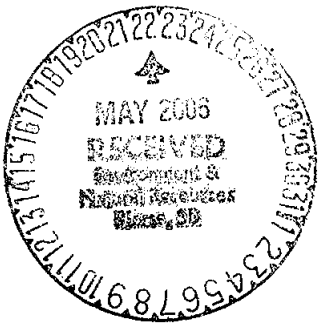
CLEAN WATER ACTION



May 19, 2006

Mr. Steven M. Pirner, Secretary
Department of Environment and Natural Resources
Division of Environmental Services
523 East Capitol, Joe Foss Building
Pierre, South Dakota 57501

RE: Comments on Draft Prevention of Significant Deterioration Air Quality Preconstruction Permit (No. 28.0803-PSD)

Dear Mr. Pirner:

Thank you for the opportunity to comment on Otter Tail Power Company's (OTP) draft Prevention of Significant Deterioration (PSD) air quality permit for Big Stone II. Clean Water Action (CWA) is a citizen-based environmental organization with over 9,000 members in South Dakota and a Midwest Regional office in Minneapolis.

CWA is working with our allies and members across the Midwest to promote renewable energy and sustainable practices by electrical utilities. Big Stone II threatens a future of renewable energy and will impact air and water quality beyond the South Dakota – Minnesota border. We urge the Department of Environment and Natural Resources to consider the potential environmental and economic costs involved with constructing and operating Big Stone II before granting a PSD air quality permit to OTP and the Big Stone II partners. Specifically, the board and members of our organization are very concerned about this permit for several reasons:

- Big Stone II proposes a significant investment in coal-based power that will contribute to the decline of air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special recreational, scenic, and historic value. Tall exhaust stacks reduce local pollution at Big Stone II, but they export pollution problems far downwind. The nitrogenous and sulfurous pollutants from fuel combustion can drift hundreds of miles before falling as acid rain precipitation. Acid precipitation erodes important cultural and historical monuments, and harms aquatic and terrestrial ecosystems. Ecologists have observed lakes dying as far away as eastern Canada due to acid rain from the Midwest's air pollution. Wind energy is a better energy investment because it reduces

Midwest Regional Office • 308 East Hennepin Avenue • Minneapolis, MN 55414 • (612) 623-3666
Duluth Office • 394 Lake Avenue South #312A • Duluth, MN 55802 • (218) 722-8557
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air and water pollution and toxic wastes. Pollution not created locally is pollution not exported nationally and globally.

- Big Stone II proposes economic growth in a manner inconsistent with the preservation of existing clean air resources. Big Stone II can only add to the air pollution problems in the United States. Limiting Big Stone's pollution output will not decrease our nationwide pollution or ensure that our clean air resources are preserved. Wind energy preserves our clean air resources because it generates electricity with no air emissions; no fuel to mine, transport, or store; no cooling water; no water pollution; and no wastes.

- Big Stone II will be another source of the nitrogen oxide and sulfur dioxide pollution contributing to well-known public health problems. Nitrogen oxide is one of the primary components of ozone, or smog. According to EPA studies, smog is a lung irritant that can exacerbate asthma and other respiratory conditions. Sulfur dioxide is the primary component of soot. Some soot particles are small enough to become embedded in the lungs – this is dangerous for the elderly, young children, and people with lung diseases. Notably, the Big Stone II project, as proposed, forgoes a PSD review for nitrogen oxide and sulfur dioxide. Wind energy is a healthy alternative to coal-based energy because it results in fewer deaths and illnesses caused by coal pollution.

- Big Stone II will impose economic risks on consumers. Big Stone II proposes to use subbituminous coal as its main fuel. This cleaner-burning type of coal, unfortunately, is only mined in about a half-dozen western states and needs to be transported to power plants via rail. Thus the availability of subbituminous coal to Big Stone II is fully dependent on the railroad. Coal shipping customers are currently requesting the Department of Justice to examine the rate policies of multiple railroads. Big Stone II could easily become a captive customer of the railroad, which is not subject to antitrust laws. If this happens, energy consumers will also be held captive and subjected to high energy prices. In order to address environmental concerns by using cleaner-burning fuel, Big Stone II will be imposing economic risks on consumers. These risks are unacceptable in light of the availability of wind energy as an economic source of energy. The wind is always blowing somewhere on the Great Plains. South Dakota ranks fourth in the U.S. in renewable energy potential, with a potential power output of 117,200 MW. That is the equivalent of 195 coal plants the size of Big Stone II.

- The draft PSD permit describes significant amounts of carbon emissions from the facility. This is not an appropriate time to be releasing more carbon – the main cause of global warming - into the atmosphere. The vast majority of scientists believe that anthropogenic global warming is real. Real renewable energy, such as wind energy, mitigates the release of global climate change gases; it does not increase them. We should work to reduce climate change, rather than permitting facilities like this.

- The analysis of vegetation impacts must examine the full impact of carbon dioxide. Carbon dioxide is another source of carbon – again, the main cause of global warming – in the atmosphere. Long-term temperature and moisture changes are the master limiting factors for the geographic ranges of plants and animals. Scientists have already observed changes in plant and animal distributions as species "migrate" higher in elevation to cope with a warmer climate. The ultimate effect of such migration is that migrating species will require human assistance to move into new ranges where they can survive as the climate warms. If this does not occur, they may become extinct.

- The analysis of vegetation impacts must examine the full impact of mercury. When mercury enters the water, it is transformed to a more toxic substance called methylmercury. Methylmercury is easily absorbed by plants and small bacteria. According to information provided by the EPA, mercury harms plants by causing plant senescence, growth inhibition, decreased chlorophyll content, leaf injury, root damage, and inhibited root growth and function. Fish that eat mercury-contaminated aquatic plants exhibit reduced reproductive success, impaired growth, developmental and behavioral abnormalities, and even death. Exposure to mercury can also cause adverse effects in birds and mammals (including humans). Humans exposed to methylmercury through fish consumption or other routes may exhibit neurotoxic effects that include a decline in motor skills and sensory ability, tremors, inability to walk, convulsions, and even death. Mercury is currently a widespread concern because of its health risk to people and economic losses to fishing tourism, fisheries, and subsistence fishers. Airborne mercury would affect Big Stone Lake and Minnesota's Big Stone State Park. Known for fishing, recreation, and camping, Big Stone Lake is already under fish consumption advisories for mercury.

- The effect that Big Stone II will have on the remnants of native tallgrass prairie at Big Stone National Wildlife Refuge should be considered in the PSD permitting process. The refuge is an area of special national natural, recreational, scenic, and historic value. One of PSD's purposes is to protect such valuable resources. The refuge welcomes thousands of visitors per year to enjoy the wetlands and tallgrass prairie. Notably, the refuge contains large tracts of native tallgrass prairie that once covered millions of acres but now only exists in isolated remnants. Any effects that Big Stone II will have on vegetation will impact this important and rare prairie ecosystem (and also the only population of ball cactus – an endangered species - in Minnesota). The PSD construction permit application submitted by OTP claims that Big Stone II's air pollution (including sulfur dioxide, nitrogen oxide, carbon monoxide, and particulate matter) will have an insignificant effect on vegetation. OTP cites several dated scientific studies (mostly from the 1970's and 1980's) to support its claims, but these studies ignore the effects of acid rain, carbon dioxide, or mercury on vegetation. According to current research, concentrations of polluting gases (such as SO_2 and NO_x) typically found in urban areas are within a range inhibitory to plant growth. In addition, particulate matter screens out sunlight and interferes with photosynthesis in plants. Vegetation weakened by air pollution can become more susceptible to invasion by pathogens and pests.

- Big Stone II's effect on waterfowl in the refuge must also be considered in the PSD permitting process. Big Stone National Wildlife Refuge is a major waterfowl and migration area. Many of the refuge's objectives relate to waterfowl and other migratory birds. The refuge seeks to provide resting, nesting, and feeding habitat for migratory birds; to provide habitat for resident wildlife; and to protect endangered and threatened species. The refuge is also actively engaged in shorebird research and is a candidate site of the Western Hemispheric Shorebird Reserve Network. Notably, there is a mapped bald eagle nest about 0.3 mile from the Big Stone I site – the bald eagle remains a federally threatened species. Big Stone II's mercury output in particular could have a detrimental effect on these bird populations and the goals of the Big Stone National Wildlife Refuge.

- Big Stone II's effect on the King of Trails (scenic Highway 75) needs to be considered in the PSD permitting process. One purpose of the PSD is to protect areas of recreational or scenic value. King of Trails stretches from the Gulf of Mexico north to Canada. The Minnesota portion runs along the state's border with South Dakota. One of the primary attractions of this scenic byway is the views of wide grasslands and picturesque state parks. Pollution from Big Stone II could significantly impact the King of Trails – an area of recreational and scenic value.

- Big Stone II could have an impact on Big Stone Lake State Park beyond effects on plants and wildlife. The area has unique geological features that have cultural, historical, and scientific value. At one time, it was the south end of glacial Lake Agassiz. Today, ancient fossil remains of sharks' teeth can be seen in the park. Such historical features and artifacts should be preserved for future generations. The development another coal-based power plant threatens the preservation of these valuable resources.

In addition to general comments, CWA has specific questions about the findings described in OTP's PSD construction permit application, draft PSD permit, and statement of basis.

Questions

1. Why is the facility using a single baghouse to control air emissions from all three coal silos? Is this practice common? Would multiple baghouses do a better job of reducing air emissions?
2. How will Big Stone II be controlling mercury emissions? How well does the wet flue gas desulfurization system control mercury emissions? Is this the only proposed method of mercury control, or does the baghouse control mercury as well? How effective is a baghouse in controlling mercury?
3. What analysis led DENR to the conclusion that the use of a baghouse or electrostatic precipitator are inappropriate ways to control particulate matter emissions at Big Stone II? How effective are the control measures listed in the Natural Events Action Plan for Rapid City in comparison with a baghouse or electrostatic precipitator?
4. How accurate is the air dispersion modeling analysis (the ISCST3 model, Version 02035) used to estimate air quality?

5. Will Big Stone I and II be monitored for their combined impact on vegetation; wildlife; parks; and places of cultural, historical, or scientific value? Will there be any monitoring of endangered or threatened plants and animals that could be affected by Big Stone I and II?
6. How will vegetation realistically respond to additional sulfur dioxide and nitrogen oxide in the local environment? According to the studies cited by OTP, vegetation may be minimally impacted by air pollution, but surely plants will exhibit some response to a change in the environment.

Thank you for your consideration.

Sincerely,

Erin Jordahl Redlin

Erin Jordahl Redlin
Energy Campaign Coordinator
Clean Water Action